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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 6300  
SEATTLE, WA 98104-7092

EXAMINER
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NEURAUTER, GEORGE C

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,372

Applicant(s)

BERG, MITCHELL T.

Examiner

George C. Neurauter, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-12, 16-22, 25-27 and 31-59 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 10-12, 16-22, 25-27 and 31-59 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/27/05, 6/6/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

Claims 1-7, 10-12, 16-22, 25-27 and 31-59 are currently presented and have been examined.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20-21, 50-52, and 55-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims recite wherein a reference to a connection endpoint or an indication within an encapsulated packet indicates a group of sequence numbers associated with a connection and wherein the reference indicates an IP address of a client, a port of an application executed by a client, an IP address of a first computing device or server, and a port of an application executed by a first computing device or server. This subject matter is not described within the specification in

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order to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 16-18, 31-33, and 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 16 recite "migrate the data structure associated with the connection". It is unclear as to where the data structure is migrated.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for

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establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7, 10-12, 16-22, 25-27 and 31-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of US Patent 5 918 017 to Attanasio et al.

Regarding claim 1, Applicant's admitted prior art discloses an information processing system, comprising:

a first computing device (referred to in the specification as a "server"; page 8, lines 15-23 and Figure 1a of the specification) configured to:

receive an initialization packet originating from a client; (page 8, lines 1-7, specifically "a server...waits for a client to establish a connection with the server through a specified IP address and TCP port..."; page 8, lines 8-14, specifically "After accepting a connection from a requesting client..."; paragraph 0054, specifically "The client and server communicate with one another through IP packets sent through the IP network")

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store a data structure ("connection endpoint") associated with a connection to the client; (page 8, lines 8-14, specifically "the server...allocates (or "establishes" or "forms") a data structure (of the connection with the client) to store client-to-server protocol specific connection information.")

Applicant's admitted prior art does not expressly disclose wherein the first computing device selects a computing device to service the client, when the first computing device is selected to service the client, bind the data structure associated with a connection to the client to an application of the first computing device, and when the first computing device is not selected to service the client, migrate the data structure associated with the connection.

Attanasio discloses wherein the first computing device selects a computing device to service the client (column 5, line 43-column 6, line 24), when the first computing device is selected to service the client, bind the data structure associated with a connection to the client to an application of the first computing device (column 4, lines 64-67; column 5, lines 39-42; column 6, lines 25-41), and when the first computing device is not selected to service the client, migrate

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the data structure associated with the connection (column 4, lines 64-67; column 5, lines 39-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Attanasio discloses that selecting a computing device to service a client enables dynamic distribution of incoming connections based on the load of the computer device (column 2, lines 3-9) and using a data structure to associate a computing device to a connection of a client enables direct forwarding of packets from clients to the selected computing device (column 4, lines 31-54). In view of these specific advantages and that the references are directed to establishing and maintaining client to server connections, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

Regarding claim 2, Applicant's admitted prior art and Attanasio disclose the system of claim 1.

Applicant's admitted prior art discloses wherein the data structure includes a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the

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connection endpoint information includes a group of send and receive sequence numbers..."

Regarding claim 3, Applicant's admitted prior art and Attanasio disclose wherein the system of claim 1.

Applicant's admitted prior art discloses wherein the data structure includes an IP address of the client, a port of an application executed by the client, an IP address of the first computing device, and a port of the application executed by the first computing device. (page 8, lines 15-23, specifically "...the connection endpoint information includes the client's and server's respective 32-bit IP addresses, the client application's and server application's respective 16 bit TCP connection ports..."

Regarding claim 4, Applicant's admitted prior art discloses an information processing system, comprising:

a first computing device (referred to in the specification as a "server"; page 8, lines 15-23 and Figure 1a of the specification) configured to:

receive a request packet originating from a client (page 8, lines 24-31, specifically "After establishing a successful connection, the client and server are operable to send (and receive) information to (and from) one another through the associated socket connection."; page 9, lines 1-8, specifically



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"With read and write calls to the socket layer, the client and server are operable to send and receive information at the application level. The client and server communicate with one another through IP packets sent through the IP network").

Applicant's admitted prior art does not disclose when the packet is associated with a connection that corresponds to an application of the first computing device, forward the packet and a reference to an associated connection endpoint to a network protocol stack that is external to an operating system of the first computing device.

Attanasio discloses when the packet is associated with a connection that corresponds to an application of the first computing device, forward the packet and a reference to an associated connection endpoint to a network protocol stack that is external to an operating system of the first computing device. (column 4, lines 40-43; column 5, lines 18-22)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Attanasio discloses that forwarding packets and a reference to an associated connection point enables direct forwarding of packets from clients to the selected computing device (column 4, lines 31-54). In view of these specific advantages and that the references are directed

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to establishing and maintaining client to server connections, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

Regarding claim 5, Applicant's admitted prior art and Attanasio disclose the system of claim 4.

Applicant's admitted prior art discloses wherein the reference indicates a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

Regarding claim 6, Applicant's admitted prior art and Attanasio disclose the system of claim 4.

Applicant's admitted prior art discloses wherein the reference indicates an IP address of the client, a port of an application executed by the client, an IP address of the first computing device, and a port of the application executed by the first computing device. (page 8, lines 15-23, specifically "...the connection endpoint information includes the client's and server's respective 32-bit IP addresses, the client

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application's and server application's respective 16 bit TCP connection ports...")

Regarding claim 7, Applicant's admitted prior art and Attanasio disclose the information processing system of claim 1.

Applicant's admitted prior art discloses wherein in response to at least the initialization packet the first computing device is configured to generate an acknowledgement to the client (page 8, lines 24-31).

Regarding claim 10, Applicant's admitted prior art discloses an information processing system, comprising:

a first computing device (referred to in the specification as a "server"; page 8, lines 15-23 and Figure 1a of the specification) configured to:

associate an application of the first computing device with a data structure associated with a connection to a client (page 8, lines 8-14, specifically "...the server...allocates...a data structure (of the connection of the client) to store client-to-server protocol specific connection information."; page 8, lines 15-23, specifically "...the connection endpoint information includes...the client application's and server application's respective 16-bit TCP connection ports...").

Applicant's admitted prior art does not disclose selectively disassociating the application of the first

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computing device from the data structure and outputting a reference to the data structure associated with the connection.

Attanasio discloses selectively disassociating the application of the first computing device from the data structure (column 5, lines 10-13; column 7, lines 45-62) and outputting a reference to the data structure associated with the connection (column 4, lines 40-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Attanasio discloses that disassociating an application from the data structure enables the system to dynamically shift the connection to other computing devices in the event the computing device can no longer respond (column 7, lines 55-62) and outputting a reference to a data structure enables direct forwarding of packets from clients to the selected computing device (column 4, lines 31-54). In view of these specific advantages and that the references are directed to establishing and maintaining client to server connections, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

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Regarding claim 11, Applicant's admitted prior art and Attanasio disclose the system of claim 10.

Applicant's admitted prior art discloses wherein the data structure includes a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

Regarding claim 12, Applicant's admitted prior art and Attanasio disclose the system of claim 10.

Applicant's admitted prior art discloses wherein the data structure includes an IP address of the client, a port of an application executed by the client, an IP address of the first computing device, and a port of the application executed by the first computing device. (page 8, lines 15-23, specifically "...the connection endpoint information includes the client's and server's respective 32-bit IP addresses, the client application's and server application's respective 16 bit TCP connection ports...")

Claims 16-27 are also rejected since claims 16-27 recite a method that contain substantially the same limitations as recited in claims 1-7 and 10-12 respectively.

Regarding claim 31, Applicant's admitted prior art and Attanasio disclose the system of claim 1.

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Applicant's admitted prior art discloses wherein the data structure comprises a connection endpoint. (page 8, lines 8-14, specifically "...the server...allocates...a data structure (of the connection of the client) to store client-to-server protocol specific connection information. This data structure is referred to as...(or "connection endpoint").)

Regarding claim 32, Applicant's admitted prior art and Attanasio disclose the system of claim 1.

Applicant's admitted prior art does not disclose wherein the first computing device is configured to migrate the data structure by storing a reference to a second computing device; and associating the stored reference with the data structure.

Attanasio discloses wherein the first computing device is configured to migrate the data structure by storing a reference to a second computing device; and associating the stored reference with the data structure. (column 4, lines 64-67; column 5, lines 39-42; column 6, lines 24-37).

Claim 32 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 32.

Regarding claim 33, Applicant's admitted prior art and Attanasio disclose the system of claim 1.

Applicant's admitted prior art does not disclose wherein the first computing device is configured to select the computing

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device to service the client based at least in part on a state of the first computing device.

Attanasio discloses wherein the first computing device is configured to select the computing device to service the client based at least in part on a state ("load") of the first computing device. (column 2, lines 6-10; column 5, line 43-column 6, line 24)

Claim 33 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 33.

Regarding claim 34, Applicant's admitted prior art and Attanasio disclose the system of claim 4.

Applicant's admitted prior art discloses wherein the application of the first computing device is a socket-based application. (page 8, lines 1-7, specifically "In FIG. 1a, a server makes its socket application (or "socket-based application") available through the IP network and waits for a client to establish a connection with the server through a specified IP address and TCP port (e.g. through a listening socket).")

Regarding claim 35, Applicant's admitted prior art and Attanasio disclose the system of claim 4.

Applicant's admitted prior art does not disclose wherein the first computing device is further configured to, when the

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packet is not associated with a connection that corresponds to an application of the first computing device, selectively encapsulate the packet and forward the encapsulated packet.

Attanasio discloses wherein the first computing device is further configured to, when the packet is not associated with a connection that corresponds to an application of the first computing device, selectively encapsulate the packet and forward the encapsulated packet. (column 5, lines 18-22)

Claim 35 is rejected since the motivations regarding the obviousness of claim 4 also apply to claim 35.

Regarding claim 36, Applicant's admitted prior art and Attanasio disclose the system of claim 35.

Applicant's admitted prior art does not disclose wherein the encapsulated packet includes a reference to the associated connection endpoint.

Attanasio discloses wherein the encapsulated packet includes a reference to the associated connection endpoint. (column 4, lines 40-43; column 5, lines 18-22)

Claim 36 is rejected since the motivations regarding the obviousness of claim 4 also apply to claim 36.

Regarding claim 37, Applicant's admitted prior art and Attanasio disclose the system of claim 10.



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Applicant's admitted prior art does not disclose wherein the reference is output to a second computing device for associating an application of the second computing device with the data structure of the connection.

Attanasio discloses wherein the reference is output to a second computing device for associating an application of the second computing device with the data structure of the connection. (column 4, lines 64-67; column 5, lines 39-42; column 6, lines 24-37)

Claim 37 is rejected since the motivations regarding the obviousness of claim 10 also apply to claim 37.

Regarding claim 38, Applicant's admitted prior art and Attanasio disclose the system of claim 37.

Applicant's admitted prior art does not disclose wherein the application of the first computing device is of a first type and the application of the second computing device is of a second type.

Attanasio discloses wherein the application of the first computing device is of a first type and the application of the second computing device is of a second type. (column 6, lines 29-41)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings

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of these references since Attanasio discloses that the data structure is able to associate the application of the computing device with the connection with the client (column 6, lines 33-36). In view of these specific advantages and that the references are directed to establishing and maintaining client to server connections, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

Regarding claim 39, Applicant's admitted prior art and Attanasio disclose the system of claim 37.

Applicant's admitted prior art does not disclose wherein the first computing device is configured to selectively disassociate the application of the first computing device from the data structure based at least in part on a state of at least one of the first computing device or the second computing device.

Attanasio discloses wherein the first computing device is configured to selectively disassociate the application of the first computing device from the data structure based at least in part on a state of at least one of the first computing device or

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the second computing device. (column 5, lines 10-13; column 7, lines 45-62)

Claim 39 is rejected since the motivations regarding the obviousness of claim 39 also apply to claim 10.

Claims 40-48 are also rejected since claims 40-48 recite a method that contain substantially the same limitations as recited in claims 31-38 respectively.

Regarding claim 49, Applicant's admitted prior art discloses a computer-readable memory medium containing instructions for controlling a processor of a first server (referred to in the specification as a "server"; page 8, lines 15-23 and Figure 1a of the specification) to selectively load balance and direct network requests among a plurality of servers by receiving a request packet originating from a client (page 8, lines 24-31, specifically "After establishing a successful connection, the client and server are operable to send (and receive) information to (and from) one another through the associated socket connection."; page 9, lines 1-8, specifically "With read and write calls to the socket layer, the client and server are operable to send and receive information at the application level. The client and server communicate with one another through IP packets sent through the IP network").

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Applicant's admitted prior art does not disclose selectively, when the packet is associated with a connection endpoint bound to a socket of an application of the first server, forwarding the packet and a reference to the associated connection endpoint to a protocol stack of the first server; and when the packet is associated with a connection endpoint bound to a socket of an application of a second server, encapsulating the packet and forwarding the encapsulated packet to a second server, the encapsulated packet including a reference to the associated connection endpoint bound to the socket of the application of the second server.

Attanasio discloses selectively, when the packet is associated with a connection endpoint bound to a socket of an application of the first server, forwarding the packet and a reference to the associated connection endpoint to a protocol stack of the first server; (column 4, lines 40-43; column 5, lines 18-22) and when the packet is associated with a connection endpoint bound to a socket of an application of a second server, encapsulating the packet and forwarding the encapsulated packet to a second server (column 5, lines 18-22), the encapsulated packet including a reference to the associated connection endpoint bound to the socket of the application of the second server (column 4, lines 40-43; column 5, lines 18-22).

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Claim 49 is rejected since the motivations regarding the obviousness of claim 4 also apply to claim 49.

Regarding claim 50, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 49.

Applicant's admitted prior art discloses the medium further comprising instructions that control the processor of the first server by including in the reference that is forwarded to the protocol stack an indication of a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

Regarding claim 51, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 49.

Applicant's admitted prior art discloses the medium further comprising instructions that control the processor of the first server by: including an indication within an encapsulated packet of a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

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Regarding claim 52, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 49.

Applicant's admitted prior art discloses the medium further comprising instructions that control the processor of the first server by including in the reference that is forwarded to the protocol stack an indication of an IP address of the client, a port of an application executed by the client, an IP address of the first server, and a port of an application executed by the first server. (page 8, lines 15-23, specifically "...the connection endpoint information includes the client's and server's respective 32-bit IP addresses, the client application's and server application's respective 16 bit TCP connection ports...")

Regarding claim 53, Applicant's admitted prior art discloses a computer-readable memory medium containing instructions for controlling a processor of a first server (referred to in the specification as a "server"; page 8, lines 15-23 and Figure 1a of the specification) to selectively load balance and direct network requests among a plurality of servers by:

associating an application of the first server to a data structure associated with a connection with a client; (page 8,

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lines 8-14, specifically "...the server...allocates...a data structure (of the connection of the client) to store client-to-server protocol specific connection information."; page 8, lines 15-23, specifically "...the connection endpoint information includes...the client application's and server application's respective 16-bit TCP connection ports...")

Applicant's admitted prior art does not disclose disassociating the application of the first server from the data structure associated with the connection and outputting a reference to the data structure associated with the connection to a second server for associating an application of the second server to the data structure associated with the connection.

Attanasio discloses disassociating the application of the first server from the data structure associated with the connection (column 5, lines 10-13; column 7, lines 45-62) and outputting a reference to the data structure associated with the connection to a second server for associating an application of the second server to the data structure associated with the connection (column 4, lines 40-43).

Claim 53 is rejected since the motivations regarding the obviousness of claim 10 also apply to claim 53.

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Regarding claim 54, Applicant's admitted prior art and Attanasio discloses the computer-readable memory medium of claim 53.

Applicant's admitted prior art discloses the medium further comprising instructions that control the processor of the first server by including in the data structure a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

Regarding claim 55, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 53.

Applicant's admitted prior art discloses the medium further comprising instructions that control the processor of the first server by including in the outputted reference an indication of a group of sequence numbers associated with the connection. (page 8, lines 15-23, specifically "the connection endpoint information includes a group of send and receive sequence numbers...")

Regarding claim 56, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 53.



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Applicant further comprising instructions that control the processor of the first server by including in the outputted reference an indication of an IP address of the client, a port of an application executed by the client, an IP address of the second server, and a port of an application executed by the second server. (page 8, lines 15-23, specifically "...the connection endpoint information includes the client's and server's respective 32-bit IP addresses, the client application's and server application's respective 16 bit TCP connection ports...")

Regarding claim 57, Applicant's admitted prior art and Attanasio disclose the computer-readable memory medium of claim 53.

Applicant's admitted prior art does not disclose the medium further comprising instructions that control the processor of the first server by re-associating the application of the first server to the data structure associated with the connection with the client.

Attanasio discloses the medium further comprising instructions that control the processor of the first server by re-associating the application of the first server to the data structure associated with the connection with the client.

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(column 5, lines 10-13; column 7, lines 45-62, specifically lines 56-62)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since Attanasio discloses that re-associating the application of the first server to the data structure associated with the connection with the client allows the system to compensate if the device is temporarily unavailable and reassociate client connections when the device becomes available (column 7, lines 45-62, specifically lines 56-62; column 8, lines 19-27). In view of these specific advantages and that the references are directed to establishing and maintaining client to server connections, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor, which would lead one of ordinary skill to reasonably expect a successful combination of the teachings.

Regarding claim 58, Applicant's admitted prior art discloses a first server, comprising:

a memory configured to store a data structure associated with a connection to a client originating an initialization packet (page 8, lines 1-7, specifically "a server...waits for a

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client to establish a connection with the server through a specified IP address and TCP port..."; page 8, lines 8-14, specifically "After accepting a connection from a requesting client..."; paragraph 0054, specifically "The client and server communicate with one another through IP packets sent through the IP network"); (page 8, lines 8-14, specifically "the server...allocates (or "establishes" or "forms") a data structure (of the connection with the client) to store client-to-server protocol specific connection information."); and a network protocol stack external to an operating system of the first server (page 9, lines 9-10).

Applicant's admitted prior art does not disclose a module configured to selectively bind the data structure associated with the connection to the client to an application of the first server.

Attanasio discloses a module configured to selectively bind the data structure associated with the connection to the client to an application of the first server. (column 4, lines 64-67; column 5, lines 39-42; column 6, lines 25-41)

Claim 58 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 58.

Regarding claim 59, Applicant's admitted prior art and Attanasio disclose the server of claim 58.

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Applicant's admitted prior art does not disclose wherein, when the first server is not selected to service the client, the first server is configured to migrate the data structure associated with the connection.

Attanasio discloses wherein, when the first server is not selected to service the client, the first server is configured to migrate the data structure associated with the connection.

(column 4, lines 64-67; column 5, lines 39-42)

Claim 59 is rejected since the motivations regarding the obviousness of claim 1 also apply to claim 59.

#### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art teaches the state of the art in establishing and maintain client to server connections:

US Patent 6 247 060 to Boucher et al;

US Patent 6 330 602 to Law et al;

US Patent 6 334 153 to Boucher et al;

US Patent 6 393 487 to Boucher et al;

US Patent 6 434 620 to Boucher et al;

US Patent 6 691 165 to Bruck et al.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS**

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**ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

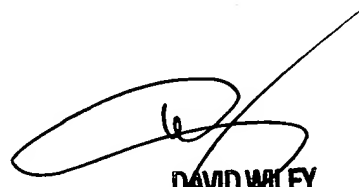
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gcn



**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**